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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/755,536

01/12/2004

David A. Pattillo

09046.0001-00000

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05/04/2006

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EXAMINER

NGUYEN, HUONG Q

ART UNIT	PAPER NUMBER
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3736

DATE MAILED: 05/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

10/755,536

Applicant(s)

PATTILLO ET AL.

Examiner

Helen Nguyen

Art Unit

3736

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/13/04, 3/14/05</u> . | 6) <input type="checkbox"/> Other: _____ |

ETAILED ACTION

Priority

1. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged, namely, priority to provisional application 60/440032, filed on 1/15/2003.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 8/13/2004 and 3/14/2005 is/are acknowledged. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-5, 10-14, and 19-23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al (US Pat No. 5790256) in view of Fullen et al (US Pub No. 20010047246).

5. In regard to **Claims 1-4**, Brown et al disclose a method for analyzing an individual's foot comprising: receiving a plurality of pressure readings wherein the pressure readings comprise a pressure value (Col.13, line 65-66) best seen in Figure 13; determining a cushioning requirement

Art Unit: 3736

and thus a level of cushioning based on the plurality of pressure readings (Col.3, line 34-41); and determining a pronation requirement and thus a degree of pronation based on the plurality of pressure readings (Col.3, line 2-8).

6. However, Brown et al do not disclose a method of analyzing a foot during a stride, wherein the pressure readings comprising a position and time value. Fullen et al disclose a method of analyzing feet for recommending footwear during movement because activity generates complex plantar pressures that need to be taken into account (¶0006). Furthermore, due to the nature of the analysis during movement, data is received relative to position and time (¶0018). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include position and time data gathered from analysis of a foot during stride, as taught by Fullen et al, in the foot analysis method of Brown et al, to provide a more accurate outcome by taking into the pressures generated during foot movement.

7. In regards to **Claim 5**, Brown et al disclose determining a recommended shoe based on the level of cushioning and the degree of pronation (Col.3, line 2-13, 34-43).

8. In regards to **Claims 10-13**, Brown et al disclose a machine-readable storage medium having stored thereon machine executable instructions, the execution of the instructions is adapted to implement a method for analyzing an individual's foot, the method comprising: receiving a plurality of pressure readings wherein the pressure readings comprise a pressure value (Col.13, line 65-66); determining a cushioning requirement and thus a level of cushioning based on the plurality of pressure readings (Col.18, line 30-47); and determining a pronation

Art Unit: 3736

requirement and thus a degree of pronation based on the plurality of pressure readings (Col.13, line 8-14).

9. However, Brown et al do not disclose a machine-readable storage medium with instructions for analyzing a foot during a stride, wherein the pressure readings comprising a position and time value. Fullen et al disclose analyzing feet for recommending footwear during movement because activity generates complex plantar pressures that need to be taken into account (§0006). Furthermore, due to the nature of the analysis during movement, data is received relative to position and time (§0018). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include position and time data gathered from analysis of a foot during stride, as taught by Fullen et al, in the machine-readable storage medium with instructions for foot analysis method of Brown et al, to provide a more accurate outcome by taking into the pressures generated during foot movement.

10. In regards to **Claim 14**, Brown et al disclose instructions for determining a recommended shoe based on the level of cushioning and the degree of pronation, wherein recommendation of last time is directly related to shoe type (Col.12, line 40-46; Col.18, line 30-47; Col.13, line 8-14).

11. In regards to **Claims 19-22**, Brown et al disclose a system for analyzing an individual's foot during a stride of the foot, the system best seen in Figure 6 comprising a memory, referred to as "RAM" (207) (Col.12, line 15-31), and a microprocessor, referred to as "controller" (200) (Col.7, line 41-58), coupled to the memory and programmed to: receiving a plurality of pressure

Art Unit: 3736

readings wherein the pressure readings comprise a pressure value (Col.13, line 65-66); determining a cushioning requirement and thus a level of cushioning based on the plurality of pressure readings (Col.18, line 30-47); and determining a pronation requirement and thus a degree of pronation based on the plurality of pressure readings (Col.13, line 8-14).

12. However, Brown et al do not disclose the system for analyzing a foot during a stride, wherein the pressure readings comprising a position and time value. Fullen et al disclose analyzing feet for recommending footwear during movement because activity generates complex plantar pressures that need to be taken into account (§0006). Furthermore, due to the nature of the analysis during movement, data is received relative to position and time (§0018). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include position and time data gathered from analysis of a foot during stride, as taught by Fullen et al, system for foot analysis method of Brown et al, to provide a more accurate outcome by taking into the pressures generated during foot movement.

13. In regards to **Claim 23**, Brown et al disclose the microprocessor programmed to determine a recommended shoe based on the level of cushioning and the degree of pronation, wherein recommendation of last time is directly related to shoe type (Col.12, line 40-46; Col.18, line 30-47; Col.13, line 8-14).

14. **Claims 9, 18, and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al (US Pat No. 5790256) in view of Fullen et al (US Pub No. 20010047246), further in view of Buyayez (US Pat No. 5640786).

Art Unit: 3736

15. Brown et al as modified by Fullen et al disclose determining a pronation requirement comprising inherently analyzing a pressure on the inside of the foot, best seen in Figure 13; inherently analyzing a pressure of the foot in the arch, best seen in Figure 13; analyzing the gait (movement) of the foot (Fullen et al ¶0006 as described above); and calculating the pronation requirement based on the analyzing steps (Col.3, line 2-8).

16. However, Brown et al as modified by Fullen et al do not disclose analyzing a speed of the foot through the arch. Buyayez discloses footwear that gives information into the speed at which the steps were taken, inherently including the speed any portion of the foot, such as through the arch (abst). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include with the method and apparatus of analyzing a foot during motion of Brown et al as modified by Fullen et al, include analyzing a speed of the foot through the arch, as taught by Buyayez, to provide a more accurate assessment of pronation by taking into an additional factor of the speed of the foot through the arch during movement.

17. **Claims 6, 14, and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al in view of Fullen et al, further in view of Demon (US Pat No. 5813142), further in view of Gray et al (US Pat No. 6122846).

18. Brown et al as modified by Fullen et al disclose determining a cushioning requirement comprising determining an average pressure which inherently includes a forefoot and a heel of the foot, as shown in Figure 13 (Col.3, line 2-8). However, Brown et al as modified by Fullen et al do not disclose if the average pressure of the heel of the foot is greater than a high threshold

Art Unit: 3736

value, setting the cushioning requirement as high; and if the average pressure of the forefoot is less than a low threshold value, setting the cushioning requirement as low, and, if not, setting the cushioning requirement as medium. However, Brown et al do disclose degrees of high, medium, and low used for foot related analysis (Col.12, line 54-55).

19. Demon discloses comparing applied pressure applied to different foot areas, such as the heel and the forefoot (Z1-5) best seen in Figure 1 (Col.3, line 1-14) with threshold pressures to vary a cushion requirement (Col.5, line 24-39) to suit the specific needs of the user (Col.2, line 8-11). Specifically, Demon teaches when a pressure, such as that in a heel is greater than the high threshold pressure, cushion is increased (Col.5, line 24-39). Demon also teaches that if no pressure comparison is indicated, increased cushioning does not occur (Col.5, line 57-65).

20. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate setting the cushion requirement based upon a comparison of pressures from certain areas of the foot, such as the heel and the forefoot, with threshold values, as taught by Demon, for the foot analysis cushioning requirement of Brown et al as modified by Fullen et al, to provide a more accurate and specific level of cushioning for the user, wherein if the pressure of heel of a foot is greater than the high threshold value, as taught by Demon, the cushion requirement setting can be increased and set at a specified level such a high, as disclosed in Brown et al as modified by Fullen et al. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to set the cushion requirement of Brown et al as modified by Fullen et al to a neutral setting such as medium if no pressure comparison is indicated, as taught by Demon.

Art Unit: 3736

21. However, Brown et al as modified by Fullen et al in combination with Demon do not disclose a comparison between the foot pressure and a low threshold value. Gray et al disclose providing an indication to a wearer when forces on the foot do not meet a low threshold value (abst) to provide important information pertaining to the low-end spectrum of desired pressure. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the foot analyzing of Brown et al as modified by Fullen et al in combination with Demon to include a comparison of foot pressure with a low threshold value, as taught by Gray et al, to set the cushion requirement at a level such as low as disclosed by Brown et al if the comparison between a portion of the foot, such as the forefoot, as taught by Demon is less than a low threshold value, as taught by Gray et al.

22. Thus, it is shown that Brown et al as modified by Fullen et al in combination with Demon, further in combination with Gray et al disclose determining an average pressure of the forefoot of the foot; determining an average pressure of the heel of the foot; if the average pressure of the heel of the foot is greater than a high threshold value, setting the cushioning requirement as high; and if the average pressure of the forefoot is less than a low threshold value, setting the cushioning requirement as low, and, if not, setting the cushioning requirement as medium.

23. **Claims 7, 16, and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al in view of Fullen et al, further in view of Demon, further in view of Gray et al, further in view of Buyayez.

Art Unit: 3736

24. Brown et al in view of Fullen et al, further in view of Demon, further in view of Gray et al disclose determining a cushion requirement but do not disclose determining a speed of the forefoot and adjusting the cushioning requirement based on the speed of the forefoot. Buyayez discloses footwear that gives information into the speed at which the steps were taken, inherently including the speed any portion of the foot, such as through the forefoot (abst). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include with the method and apparatus of analyzing a foot during motion of Brown et al as modified by Fullen et al in combination with Demon and Gray et al, include analyzing a speed of the foot through the forefoot, as taught by Buyayez, and thus adjust the cushioning requirement based on said measured speed to provide a more accurate assessment of pronation by taking into an additional factor of the speed of the foot through the forefoot during movement.

25. **Claims 8, 17, and 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al in view of Fullen et al, further in view of Demon, further in view of Gray et al, further in view of Buyayez, even further in view of Potter et al (US Pat No. 6430843).

26. Brown et al in view of Fullen et al, further in view of Demon, further in view of Gray et al and Buyayez disclose adjusting the cushioning requirement as explained above but do not disclose increasing the cushioning requirement if the speed of the forefoot is greater than a forefoot speed threshold value. Potter et al disclose that when a speed of a foot is increased, increased cushioning is desired from the resulting higher impact force (Col.11, line 53-56).

Art Unit: 3736

27. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust the cushioning requirement of Brown et al in view of Fullen et al, further in view of Demon, further in view of Gray et al, relative to speed of the forefoot, as explained above and taught by Buyayez, through a comparison with a threshold value, as taught by Demon, such that if the speed of a portion of the foot such as the forefoot is greater than threshold, cushioning is increased, as taught by Potter et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen Nguyen whose telephone number is 571-272-8340. The examiner can normally be reached on Monday - Friday, 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on 571-272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/755,536

Page 11

Art Unit: 3736

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